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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,007	02/09/2001	Brandyn Webb	07844-465001	6423

21876 7590 12/03/2003

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EXAMINER

MOSLEHI, FARHOOD

ART UNIT PAPER NUMBER

2126

DATE MAILED: 12/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/781,007

Applicant(s)

WEBB, BRANDYN

Examiner

Farhood Moslehi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

1. Claims 1-26 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1,3,4,10,11,13,14,16,17,23,24 and 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Leach et al. (6,108,715) (hereinafter Leach).
4. As per claim 1, Leach teaches a computer-implemented data processing method, comprising: running a first process in a first address space and a second process in a second address space, the first process including a request to send to the second process data having a data type (e.g. col. 5, lines 16-30); calling at runtime a type creation function to create a first type object describing the data type, the first type object having a set of associated functions for processing data having the data type, the set of associated functions including a marshalling function for encoding data having the data type and an unmarshalling function for decoding data having the data type (e.g. col. 2, lines 45-57); and sending the data to the second process by executing the marshalling function on the data in the first process to generate encoded data and executing the unmarshalling function on the encoded data to decode the encoded data in the second process (e.g. col. 11, lines 30-60).

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5. As per claim 13, it is rejected for similar reason as stated above.
6. As per claim 14, it is rejected for similar reason as stated above.
7. As per claim 26, it is rejected for similar reasons as stated above.
8. As per claim 3, Leach shows the method wherein the data type is an array type, an integer type, a pointer type, a real type, a string type or a structure type (e.g. col. 2, lines 24-32).
9. As per claim 16, it is rejected for similar reasons as stated above.
10. As per claim 4, Leach shows the method wherein the first type object is a parameterized type object including an element identifying a location in memory, the parameterized type object describing a format for the data type based on one or more type parameters in the identified location (e.g. col. 7, lines 54-67 & col. 6, lines 1-20).
11. As per claim 17, it is rejected for similar reasons as stated above.
12. As per claim 10, Leach shows the method wherein: the type creation function is called in the first process to create a first instance of the first type object and in the second process to create a second instance of the first type object (e.g. col. 2, lines 38-57).
13. As per claim 23, it is rejected for similar reasons as stated above.
14. As per claim 11, Leach shows the method wherein: the data has a first format in the first process (e.g. col. 7, lines 54-59); and the encoded data is decoded in the second process to generate data having a second format, the second format being different than the first format (e.g. col. 7, lines 54-67).
15. As per claim 24, it is rejected for similar reasons as stated above.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Biliris et al. (5,590,327) (hereinafter Biliris).

18. As per claim 2, Leach does not specifically discuss the method wherein the set of associated functions for processing data having the data type includes a print function for printing data having the data type. Biliris clearly shows the method wherein the set of associated functions for processing data having the data type includes a print function for printing data having the data type (e.g. col. 5, lines 50-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Biliris. The motivation would have been to include a printing function in the associated function list.

19. As per claim 15, it is rejected for similar reasons as stated above.

20. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Peterson (5,504,901).

21. As per claim 5, Leach does not show the method wherein the element identifying a location in memory is an offset element identifying a location in memory relative to data. Peterson clearly shows the method wherein the element identifying a location in memory is an offset element identifying a location in memory relative to data (e.g. col. 4,

lines 35-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Peterson. The motivation would have been to separate the data from the processes with a known quantity in order to know the relative position of data at all time.

22. As per claim 18, it is rejected for similar reasons as stated above.

23. Claim 6, 7, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Peterson as applied to claim 5 above, and further in view of Hunt (6,381,735).

24. As per claim 6, Leach combined with Peterson do not specifically show the method wherein the parameterized type object describes a dynamically sized array and the type parameters include data specifying a size of the dynamically sized array. Hunt the method wherein the parameterized type object describes a dynamically sized array and the type parameters include data specifying a size of the dynamically sized array (e.g. col. 10, 17-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach, Peterson and Hunt. The motivation would have been to be able to control the size of arrays with a method.

25. As per claim 19, it is rejected for similar reasons as stated above.

26. As per claim 7, Leach combined with Peterson do not show the method wherein the parameterized type object describes a dynamically typed pointer and the type parameters include data identifying a second type object. Hunt shows the method wherein the parameterized type object describes a dynamically typed pointer and the type parameters include data identifying a second type object (e.g. col. 3, lines 59-62).

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). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach, Peterson and Hunt. The motivation would have been to access different objects through methods, as operations on objects are needed.

27. As per claim 20, it is rejected for similar reasons as stated above.

28. Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach as applied to claim 1 above, in view of Atkinson et al. (6,263,379) (hereinafter Atkinson), and further in view of Reekes et al. (5,592,588) (hereinafter Reekes).

29. As per claim 8, Leach does not specifically show the method wherein: the set of associated functions includes a type description function operable to generate a type object description describing the first type object; the encoded data includes an encoded representation of the type object description; and executing the unmarshalling function to decode the encoded data includes reconstructing the data in the second address space based on the type object description. Atkinson shows the set of associated functions includes a type description function operable to generate a type object description describing the first type object (e.g. col. 77, lines 38-64); executing the unmarshalling function to decode the encoded data includes reconstructing the data in the second address space based on the type object description (e.g. col. 78, lines 1-10); Reekes shows the encoded data includes an encoded representation of the type object description (e.g. col. 13, lines 48-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach, Atkinson and Reekes. The motivation would have been for all coding and decoding to occur based on object description. This would enable the units to be self-describing.

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30. As per claim 21, it is rejected for similar reasons as stated above.

31. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Doong et al. (6,336,148) (hereinafter Doong).

32. As per claim 9, Leach does not specifically show the method wherein: the first type object has a set of properties including a limitation condition specifying a limitation on permissible values for data having the data type; and executing the unmarshalling function to decode the encoded data includes returning an error message if the data violates the limitation condition. Doong shows the method wherein: the first type object has a set of properties including a limitation condition specifying a limitation on permissible values for data having the data type (e.g. col.5 lines 38-43); and executing the unmarshalling function to decode the encoded data includes returning an error message if the data violates the limitation condition (e.g. col. 5, lines 38-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Doong. The motivation would have been to notify the system of error messages to take corrective actions.

33. As per claim 22, it is rejected for similar reasons as stated above.

34. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Stadler et al. (5,838,971) (hereinafter Stadler).

35. As per claim 12, Leach does not specifically show the method wherein: the encoded data is generated in a format that is independent of the first and second formats. Stadler clearly shows the method wherein: the encoded data is generated in a format that is independent of the first and second formats (e.g. col. 6, lines 1-16). It

would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Stadler. The motivation would have been to have an independent format so that the format of the data could be changed for compatibility with different systems.

36. As per claim 25, it is rejected for similar reasons as stated above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhood Moslehi whose telephone number is 703-305-8646. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 703-305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5484.



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